

Datasheet for ABIN3094918

## RAD54L Protein (AA 1-747) (Strep Tag)



[Go to Product page](#)

### Overview

Quantity:	250 µg
Target:	RAD54L
Protein Characteristics:	AA 1-747
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RAD54L protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Brand:	AliCE®
Sequence:	<p>MRRSLAPSQL AKRKPEGRSC DDEDWQPGLV TPRKRKSSSE TQIQECFLSP FRKPLSQLTN</p> <p>QPPCLDSSQH EAFIRSILSK PFKVPIPNYQ GPLGSRALGL KRAGVRRALH DPLEKDALVL</p> <p>YEPPLSAHD QLKLDKEKLP VHVVDPILS KVLRRHQREG VKFLWECVTS RRIPGSHGCI</p> <p>MADEMPLGKT LQCITLMWTL LRQSPECKPE IDKAVVSPS SLVKNWYNEV GKWLGGRIQP</p> <p>LAIDGGSKDE IDQKLEGFMN QRGARVSSPI LIISYETFRL HVGVLQKGSV GLVICDEGHR</p> <p>LKNSNQTYQ ALDSLNTSRR VLISGTPIQN DLLEYFSLVH FVNSGILGTA HEFKKHFEPL</p> <p>ILKGRDAAAS EADRQLGEER LRELTSIVNR CLIRRTSDIL SKYLPVKIEQ VVCCRLTPLQ</p> <p>TELYKRFLRQ AKPAEELLEG KMSVSSLSSI TSLKKLCNHP ALIYDKCREE EDGFVGALDL</p> <p>FPPGYSSKAL EPQLSGKMLV LDYILAVTRS RSSDKVVLVS NYQTLDLFE KLCRARRYLY</p> <p>VRLDGTMSIK KRAKVVERFN SPSSPDFVFM LSSKAGGCGL NLIGANRLVM FDPDWNPNAND</p> <p>EQAMARVWRD GQKKTCYIYR LLSAGTIEEK IFQRQSHKKA LSSCVVDEEQ DVERHFSLGE</p>

LKELFILDEA SLSDTHDRLH CRRCVNSRQI RPPPDGSDCT SLAGWNHCT DKWGLRDEVL  
QAAWDAASTA ITFVFHQRSR EEQRGLR

**Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

#### Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

#### Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

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### Purification:

One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).

## Product Details

Purity: > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).

Grade: custom-made

## Target Details

Target: RAD54L

Alternative Name: RAD54L ([RAD54L Products](#))

Background: DNA repair and recombination protein RAD54-like (EC 3.6.4.12) (RAD54 homolog) (hHR54) (hRAD54),FUNCTION: Plays an essential role in homologous recombination (HR) which is a major pathway for repairing DNA double-strand breaks (DSBs), single-stranded DNA (ssDNA) gaps, and stalled or collapsed replication forks (PubMed:9774452, PubMed:24798879, PubMed:32457312, PubMed:11459989, PubMed:12205100, PubMed:27264870). Acts as a molecular motor during the homology search and guides RAD51 ssDNA along a donor dsDNA thereby changing the homology search from the diffusion-based mechanism to a motor-guided mechanism. Also plays an essential role in RAD51-mediated synaptic complex formation which consists of three strands encased in a protein filament formed once homology is recognized. Once DNA strand exchange occurred, dissociates RAD51 from nucleoprotein filaments formed on dsDNA (By similarity). {ECO:0000250|UniProtKB:P32863, ECO:0000269|PubMed:11459989, ECO:0000269|PubMed:12205100, ECO:0000269|PubMed:24798879, ECO:0000269|PubMed:27264870, ECO:0000269|PubMed:32457312, ECO:0000269|PubMed:9774452}.

Molecular Weight: 84.4 kDa

UniProt: [Q92698](#)

Pathways: [DNA Damage Repair](#)

## Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

Application Details

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol <b>Might differ depending on protein.</b>
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months